

7  
FOR OFFICIAL USE.

## REPORTS

TO THE

LOCAL GOVERNMENT BOARD

ON

## PUBLIC HEALTH AND MEDICAL MATTERS.

(*NEW SERIES No. 21.*)

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Report to the Local Government Board on the  
Sanitary Circumstances of the Axbridge  
Rural District, Somerset, by Dr. Reginald  
Farrar.

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1910.

*Price Threepence.*



# Report to the Local Government Board on the Sanitary Circumstances of the Axbridge Rural District, Somerset, by Dr. Reginald Farrar.

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ARTHUR NEWSHOLME,

Medical Officer,

17th January, 1910.

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In consequence of difficulties experienced in providing water for certain parts of this district, the Axbridge Rural District Council requested the Local Government Board to hold an inquiry into the matter, and it was decided that inquiry should be made into the sanitary circumstances of the rural district generally by one of the Board's Medical Inspectors. This duty was assigned to me, and I visited the district on July 14th, 1909, and on subsequent occasions. I conferred with the officers and several members of the rural district council at the council's offices, and in the course of my inspection visited all the larger and many of the smaller towns and villages in the district, paying special attention to the circumstances of the North Marsh portion of the district.

The Axbridge Rural District is co-terminous with the Axbridge Union, exclusive of the Weston-super-mare, Burnham, and High-bridge Urban Districts. The population was 23,397 at the census of 1891, 23,744 in 1901, and was estimated at 24,204 to the middle of 1908. The number of inhabited houses was 5,359 in 1901. The assessable value of the district was returned as £160,803 to Lady-day, 1908.

The greater part of the population is engaged in agriculture, but there are a few small factories and breweries in the district, and several laundries at Worle.

## TOPOGRAPHICAL AND GEOLOGICAL CONSIDERATIONS.

The Rural District of Axbridge is bounded on the north by the Long Ashton Rural District, on the east by the Rural Districts of Clutton and Wells, on the south by the Bridgwater Rural District, and on the west by the Bristol Channel.

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The western end of the Mendip Hills traverses the district in the form of a wedge, with its base to the east and its apex nearly touching the western coast. North and south of this range are two alluvial tracts of nearly equal extent, known respectively as the North and South Marshes. Beyond the North Marsh there is another group of hills in the north-eastern part of the district near Wrington.

The Mendip Hills, which attain a maximum elevation of about 1,000 feet above sea-level, are formed of carboniferous limestone and old red sandstone, the latter rising to the surface in the centre of the Mendip chain from beneath the highly inclined beds of the limestone. Other masses of carboniferous limestone form the hills north of Wrington and Worle Hill near Weston-super-mare. The lias and upper trias underlie the lower ground, and rest unconformably on the carboniferous limestone, the trias near the junction taking the form of "Dolomitic conglomerate," a rock consisting of fragments of limestone embedded in a hard calcareous matrix.

The alluvial portions of the district have an average elevation of less than 20 feet above ordnance datum, save for occasional lias projections, as at Worle, Woolvers Hill, Brent Knoll, and Chapel Allerton. The carboniferous limestone, owing to the numerous joints and fissures by which it is traversed, is highly permeable; hence the rain which falls on the limestone hills soaks into the ground to re-appear as springs at the lower levels. This conformation affords a key to the problems of water supply in the district.

Water can be obtained in abundance from springs or wells in villages situate at the foot or on the lower slopes of the hills, whereas on the upper slopes it is scarce, and people living at the higher altitudes either depend for their supply on rain-water caught from the roofs or have to go considerable distances down hill to fetch water. In the alluvial marsh tracts the ground-water is brackish and impure, and quite unfit for drinking purposes.

*Housing.*—Speaking generally, the housing throughout the district is fairly good, but I observed cottages with defective roofs at Axbridge. There are a large number of excellent modern cottages erected by a private land-owner at Blagdon. There are many modern villa-residences at Winscombe, and building is actively proceeding at Uphill and Worle in the neighbourhood of Weston-super-mare.

There are no building bye-laws in the district. These are needed, in view of the number of new houses that are being built. I saw some cottages at Worle in process of erection without a damp-course.

#### WATER SUPPLIES.

The public water supplies in the district are as follows :—

1. Badgworth, Weare, Biddisham, East Brent, Mark, Lympsham, and Burnham Without—total population 3,092 (1901)—are supplied with water by the South Marsh Water Scheme, from a spring in the limestone at the foot of the Mendips. The first loan for the scheme was sanctioned in August 1897, and the total amount borrowed to July 1909 is £21,852. The water is pumped into the



main from a catchment reservoir at Cross, and supplied by gravitation to the villages included in the scheme, being laid on, as is the case with the other public supplies in the district, partly to standpipes and partly to individual houses.

2. Axbridge and Cheddar—total population 2,908 (1901)—are supplied from a catchment reservoir in Cheddar Gorge fed by springs in the carboniferous limestone and old red sandstone, the same supply being also conveyed to Highbridge Urban District, which contributes to the cost of the scheme. The first loan for this scheme was sanctioned in May 1903, and the total amount borrowed to July 1909 was £9,805, exclusive of £3,495 borrowed on behalf of the Highbridge Urban District Council.

3. Winscombe, Rowberrow, and Shipham—total population 1,815 (1901)—are supplied from a catchment reservoir at Winscombe fed from a spring in the old red sandstone. The first loan for this scheme was sanctioned in May 1899, and the total amount borrowed to July 1909 was £10,280. A few houses in Churchill are also supplied from this scheme.

4. The greater part of Blagdon—population 1,089 (1901)—is supplied by gravitation from a reservoir in the hill above the village, but a few houses in the lower part of the village are supplied by the Bristol Waterworks Company, whose main reservoir is situate in this parish.

Thus a total population of nearly 9,000 is supplied by public schemes controlled by the rural district council. The Winscombe supply sometimes runs short in dry weather, but the above supplies are otherwise adequate in quality and amount.

The greater part of the parish of Uphill is supplied from the Weston-super-mare water supply.

Berrow and part of the parish of Brent Knoll are supplied by private contract from the mains of the Burnham Urban District water scheme.

Brean and part of Brent Knoll are supplied from a private reservoir on Brent Knoll.

Burrington depends partly on wells, and partly on a good supply of water brought in pipes to the village from the Mendip Hills.

Speaking generally, the villages of the South Marsh are well supplied with water from public supplies.

Villages on the lower slopes or at the foot of hills, such as Wedmore, Chapel Allerton, Hutton, Churchill, Langford, &c., are fairly well supplied by public or private wells, which are, however, in some instances exposed to risk of pollution by soakage. The same is true of the lower parts of the parishes of Wrington, Bleadon, and Congresbury, but the higher parts of these villages, and particularly the hamlet of Redhill in Wrington parish, the hamlet of Rhodyate in Congresbury parish, and about 20 houses in the upper part of Bleadon, are dependent on rain-water caught from the roofs or on water brought up-hill from inconvenient distances.

St. Anne's, Congresbury, forms part of the village of Hewish, and is in the alluvial district of the North Marsh, the needs of which in respect of water supply will be presently considered.

In Wrington water is required for properly flushing the sewers, and on this ground, independently of water needed for drinking purposes, the provision of a public supply is to be recommended.

Some private houses, including one in Wrington, are supplied with water pumped up by means of a windmill. This method might be usefully adopted for the benefit of other high-lying houses or groups of houses which are without adequate water-supply.

The parish of Banwell is scattered. The main part of the village derives water from several private wells and three public wells connected with pumps. Several of the wells are liable to pollution and some of them, especially those in the higher parts of the village, run dry in summer. Recently (in September, 1909) an outbreak of enteric fever, involving 13 cases, has occurred in the village and was traced to the water of one of the public wells, which was found to be seriously contaminated. Measures have been taken to cleanse this well and protect it from further contamination, and the results are reported as satisfactory. The inhabitants of some 17 houses in the higher part of the village, near the castle, are dependent on rain-water caught from the roofs for their supply, or have to fetch water from the bottom of a steep hill. A large part of the parish, comprising perhaps a third of the population, is in the North Marsh, and the people use either roof water or water caught in shallow pits, or the water of a dyke (rhine), much liable to pollution, which runs along the highway for  $1\frac{1}{2}$  miles. This part of the parish will be discussed in connection with the water supply of the North Marsh.

The Bristol Waterworks Company have recently purchased a large pond fed by a spring of good water, together with a grist-mill worked by the head of this water, and a brewery, in the middle of the village of Banwell.

The North Marsh area, which comprises the parishes of Puxton, and Wick St. Lawrence, and parts of the parishes of Congresbury, Banwell, and Worle, suffers very seriously for want of water. This is an alluvial marshy tract, having a general level of less than 20 feet above ordnance datum, and traversed by sluggish dykes (rhines). Water is collected in shallow wells or ponds, which are generally liable to pollution, and several of which have been shown by analysis to be unfit for drinking purposes. Some of the people drink water from rhines which receive the drainage from farm-yards, and which are at times used for sheep-washing; others depend on what water they can catch from the roofs. A farmer at Wick St. Lawrence informs me that he has for 25 years sent a cart daily to Worle, a distance of  $2\frac{1}{2}$  miles from his residence, to fetch drinking water from a pump. Close to Puxton station in Banwell parish, is a large dairy from which about 1,000 gallons of milk are sold daily, and in which butter is made. The only water available for washing churns, &c., and for making butter, is that of a sewage-laden rhine which runs near the dairy. It is obvious that should this rhine become specifically infected with the germs of enteric fever there would be danger of a serious and widespread outbreak among the consumers of this milk and butter.

There are two public pumps and several private wells in Worle but the water is of doubtful quality and probably liable to pollution

and several of the houses in the higher parts of the village have no water within convenient distance. By the Weston-super-mare Water Act, 1878, powers are given to the Weston-super-mare Urban District Council to supply Worle with water, but hitherto no steps have been taken in this direction, and it seems to be doubtful whether the urban district has sufficient water available for this purpose.

Kewstoke has a public pump and private wells and the character of the water supply is similar to that of Worle.

A comprehensive scheme of water supply appears to be urgently needed for the North Marsh.

The parts of the area in which the need of a water supply is urgent beyond dispute are the whole parishes of Wick St. Lawrence, and Puxton, that part of the parish of Congresbury which comprises about half the village of Hewish (the other half of the village belonging to the parish of Puxton), and the low-lying portions of Banwell. The wells at Worle are of doubtful purity, and the higher portions of Worle, Banwell (near the castle), Congresbury (Rhodyate), and Wrington (Redhill) have no water supply other than roof-water. At Wrington water is required for proper flushing of the sewers.

I recommend, therefore, that a comprehensive scheme of water supply should be adopted for the parishes of Wrington, Congresbury, Banwell, Puxton, and Wick St. Lawrence. If the Weston-super-mare Urban District Council be not able and willing to provide a proper and sufficient supply of water for Worle, that parish should also be included in the scheme. The assessable value and population of these parishes are shown in the following table :—

			Assessable Value. £	Population, 1901.
Wrington and Broadfield	...		6,914	1,552
Congresbury	...	...	8,450	1,167
Banwell	...	...	10,619	1,413
Puxton	...	...	1,784	187
Wick St. Lawrence	...	...	2,021	181
Worle	...	...	7,629	1,299
TOTALS	...	...	<u>£37,417</u>	<u>5,799</u>

Thus, the aggregate population of the district to be included in a comprehensive scheme, as indicated above, is 5,799, and the assessable value £37,417.

Mr. Powell, the consulting engineer for the rural district, who has drawn up several water schemes for the district, estimates that the cost of a complete scheme for the above parishes would be about £30,000 (less than one year's assessable value). The amount of water needed for the area would hardly exceed 100,000 gallons daily, and Mr. Powell has computed, from gaugings taking in August, 1894, that in a dry summer 500,000 gallons of water are running to waste from the "Twin Springs" in Banwell Hill, which he has proposed to utilise for the scheme.



In the alternative, water might be supplied to this district by the Bristol Waterworks Company, the directors of which company have expressed their willingness to entertain seriously any suggestion made to them by the Axbridge Rural District Council for this purpose.

In this connection it may be noted that the rural district council have in some instances shelved their responsibility in questions of water supply by referring them to the decisions of parish councils, and taking no further action if the vote of the parish council was adverse to the provision of a supply. In such questions, however, the verdict of a parish council or parish meeting cannot always be taken as a trustworthy indication of the real needs of a parish. Experience shows that a majority representing persons who may be satisfied with their own water supply will often overpower a minority whose need of water may be urgent.\* The district council, aided by the advice of their medical officer of health, are better fitted than the parish council to take an impartial view of the requirements of any parish as a whole. And, in this connection, the district council must bear in mind that it is on them that the legislature has imposed the duty of seeing that a sufficient supply of wholesome water is available for the use of the inhabitants of their district.

#### SEWERAGE AND DRAINAGE.

The only village in the district which is completely sewered and has a sewage disposal system is Wrington. Loans to the total value of £3,900 have been sanctioned in respect of the sewerage of this village in 1903, 1905 and 1908. The sewage disposal system, which is in a field well remote from the village, comprises septic tanks and bacterial filter beds. As storm-water is excluded from the sewers, and there are no trade effluents, and the water of the village is derived only from wells, a public water supply is needed for the efficient flushing of the sewers.

The village of Uphill is sewered to the Weston-super-mare sewerage system, the outfall sewer of which is tide-locked and discharges into the sea. A loan of £1,300 in respect of the scheme was sanctioned in January, 1909.

Of the remaining villages of the district several are partially sewered by separate lengths of sewer-pipes, which for the most part discharge without treatment of the effluents to rivers, water-courses, or ditches.

The River Yeo is polluted at several points by the discharge of crude sewage from the sewers of Cheddar and Axbridge.

Banwell is partially sewered to a ditch which is cleaned out annually. Bleadon is partially sewered to a dyke.

Worle is sewered by several separate lengths to a stagnant dyke known as Madam Rhine which runs through the lower part of the village. The condition of this dyke is intolerably foul and offensive, the more so as not only household drainage but the effluents of

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\* For example, the Banwell Parish Council recently voted against a water-supply, whereas a parish meeting resolved in favour of one.



several laundries are discharged into it without treatment. A proper system of sewage disposal is needed for the place which is rapidly growing, but would not be effective unless conjoined with a proper water supply. Several of the schools and larger private houses are sewerred to cesspools which are emptied periodically.

In some villages, as at Langford, I observed nuisances due to the discharge of cottage drains into road-side gutters.

Butcombe and Blagdon are partially sewerred by intercepting sewers put down by the Bristol Waterworks Company for the protection of their Blagdon reservoir.

In some parts of the district, as in Axbridge, many drains are taken under houses.

*Excrement Disposal.*—Several schools, some of the larger private houses, and a few cottages have water-closets, but old-fashioned pit privies are in use for most of the cottages. These are in some instances in undue proximity to wells.

I noted hand-flushed water-closets on some of the cottage property in Cheddar. On the other hand many of the cottages in Uphill have water-closets with proper flushing cisterns.

Some of the schools, including those at Bleadon, Wrington, Congresbury, and Cheddar, have trough closets, either automatically flushed, as in the Church of England schools at Cheddar, flushed by means of a tap, as at Wrington and Congresbury, or hand-flushed by means of buckets, as in the British Schools at Cheddar.

Other schools, including Uphill, Burrington, Redhill and Worle, have separate hand-flushed water-closets. At Uphill, certainly, where there is an ample public water supply, proper flushing cisterns should be introduced.

The Blagdon schools have separate water-closets with flushing cisterns. The Axbridge schools have pail closets which are provided with plugs for mixing ashes with the excreta.

At Worle I found new cottages being erected with pit privies for closet accommodation.

*Refuse Disposal.*—There is no systematic collection of household refuse in any part of the district. Some villages have refuse tips. In Axbridge an old clay pit is used for this purpose, but a large amount of hardware and other household refuse is thrown into the river, with very unsightly results. In several parts of the district there are large uncovered ashpits for the reception of household refuse, the contents of which are allowed to accumulate for months.

Several of the schools, as at Blagdon, Worle, and Cheddar, have large open ashpits in the school playgrounds which are often made the receptacles of household refuse, including decaying vegetable matter from the schoolmaster's house. In Blagdon school playground the ashpit is 36 square feet in superficial area, and the front containing wall is only two feet high. These large open ashpits which permit of refuse being freely blown about, are particularly objectionable in school playgrounds.

In the yard adjoining the common lodging-house at Axbridge there is neither bin nor ashpit, but ashes and household refuse are

merely heaped up in a corner of the yard, from which I was informed they are removed fortnightly. At the time of my visit I observed a young child "grubbing" in the refuse heap. Systems of public scavenging should be adopted for at any rate the larger villages in the district.

*Slaughter-houses.*—These are regularly inspected. I visited several in different parts of the district, and found them clean and well-kept, properly linewashed and fairly satisfactory as regards their construction. I saw a slaughter-house at Cheddar which was built on the banks of the river, with which it communicates by three steps. All washings and drainage from the slaughter-house, which is otherwise undrained, are merely swept down the steps into the river; a certain amount of offal had also been thrown into the river.

By-laws regulating slaughter-houses, applicable only to the contributory places of Axbridge, Banwell, Blagdon, Cheddar, Uphill, Winscombe, Worle, and Wrington with Broadfield, were allowed in September, 1902.

*Dairies and Cowsheds.*—The registered dairies and cowsheds are regularly inspected. I visited several cowsheds and found them properly linewashed and well ventilated. It is a feature of the district that the climate being mild most of the cowsheds are not closed in, but are open in front throughout the year.

Regulations with respect to dairies, cowsheds and milkshops have been adopted by the district council and came into force in April, 1908. The register of cowsheds was not complete at the date of my visit.

*Common lodging-house.*—The only common lodging-house in the district is at Axbridge; this is licensed for 15 persons. As above mentioned, there is no proper arrangement for refuse disposal in connection with this house. In other respects it is clean and well kept.

*Arrangements for dealing with cases of infectious disease.*—There is no properly equipped isolation hospital in the district. A cottage has been taken at Shipham, which can be used in case of emergency; and there is a temporary hut which was erected for the reception of scarlet fever cases at Banwell. I was also informed that there are tents, bedsteads, blankets, &c., stored at Cross which were used during an epidemic of diphtheria at Wrington.

The district council possesses no disinfecter, but there is a steam disinfecter at the Workhouse at Axbridge which, I am informed, could be utilised by the district council if required, though there is no definite agreement to this effect. There is a public laundry at Worle, equipped with a disinfecter, which can be used by the public on payment.

#### SANITARY ADMINISTRATION.

The *Medical Officer of Health* is Dr. Arthur Lèche, who was appointed in 1897, and receives a salary of £100 per annum, half of which is repaid by the county council. Dr. Lèche does not hold

any diploma in public health, but is well acquainted with the sanitary requirements of his district, and is a competent adviser of the district council.

The *Inspector of Nuisances* is Mr. Harry Teek, an ex-guardian, who was formerly a farmer. Mr. Teek was appointed to his office in 1895. He receives a salary of £120 a year, half of which is repaid by the county council, and also £12 a year as water inspector for the South Marsh water supply, and £10 as inspector under the Infant Life Protection Act. Mr. Teek drives about his district in a pony carriage, and is well acquainted with every part of it. He holds the certificate of the Sanitary Inspectors' Examination Board. He is a competent officer and tactful in his dealings with the people.

The *Sanitary Surveyors* are Mr. John Lovell for the east district and Mr. J. Knight Dunster for the west district. Mr. Arthur Powell, M. Inst. C.E., acts as consulting engineer to the district council (paid by fees), and advises with regard to water schemes, &c.

Such provisions of Part III. of the Public Health Acts Amendment Act, 1890, as are applicable in rural districts, have been adopted by the district council.

By-laws affecting only the contributory places of Axbridge, Banwell, Blagdon, Cheddar, Uphill, Winscombe, Worle, and Wrington with Broadfield are in force with respect to nuisances, slaughter-houses, and the cleansing of earth-closets, privies, and cesspools. All these codes were sanctioned in 1902. Regulations with respect to dairies, cowsheds, and milkshops were, as already mentioned, adopted in 1908.

The administration of the Midwives Act, 1902, in this district is controlled by the Somersetshire County Council. There are 10 midwives on the midwives' roll in the Axbridge Union, of whom eight are trained and the remaining two are in regular practice; they are regularly inspected by the inspector for the district, Miss C. C. du Sautoy.

In conclusion, I desire to thank Mr. Reece, clerk to the rural district council, Dr. Lèche, medical officer of health, Mr. Teek, inspector of nuisances, Mr. Powell, consulting engineer, Colonel Long, formerly chairman of the district council, and others who rendered me ready and courteous assistance in the course of my inquiry.

REGINALD FARRAR.

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#### RECOMMENDATIONS.

That building by-laws on the Board's Rural or Intermediate Model, should be adopted for the whole district.

That measures should be taken to improve the Winscombe water supply, to protect wells, in those parts of the district that



are supplied by wells, from pollution, and to provide public water supplies for the parishes of Wrington, Congresbury, Banwell, Puxton, Wick St. Lawrence, and Worle.

That the District Council should take into consideration the provision of complete systems of sewerage and sewage disposal for the larger villages in their district, and in particular should give immediate attention to the sewerage of Worle.

That systematic collection of household refuse should be adopted in the larger villages of the district, and that the large ashpits which now exist in school playgrounds and elsewhere should be abolished and replaced by ashbins or by covered receptacles of moderate size.

That a properly equipped hospital for the reception of cases of infectious disease should be provided for the district.

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# Report to the Local Government Board on the Sanitary Circumstances and Administra- tion of the Bakewell Rural District, by Dr. Reginald Farrar.

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ARTHUR NEWSHOLME,

Medical Officer,

6th August, 1910.

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The Bakewell Rural District, in the County of Derby, has an area of 84,276 acres and comprises 55 parishes. At the 1901 census the population was 18,672, and the number of inhabited houses 4,256; the population is estimated to have been 18,961 in the middle of 1909, and the number of inhabited houses 4,395. The rateable value of the district is estimated to have been £125,538 in the middle of 1909, and a *1d.* rate for sanitary purposes yields about £400.

*Physical Conformation of the District.*—The district is in the Peak District of Derbyshire, and is nearly everywhere mountainous in character, the rocks consisting in the western and southern portions of the district of mountain limestone, with outcrops of toadstone, and in the eastern portion of Yoredale grit and shales, with here and there along its eastern boundary millstone grit.

For sanitary purposes the rural district is divided into two sub-districts, having each a separate medical officer of health and inspector of nuisances, the north sub-district comprising 50,273 acres, 36 parishes, and a population (in 1901) of 10,877, the south sub-district comprising 34,003 acres, 19 parishes, and a population of 7,795.

*Chief Industries of the Population.*—The population is partly agricultural, partly engaged in mining, and partly in factories. Owing to the conformation of the district there is relatively little arable as compared with pasture land.

About 200 persons are engaged in the boot trade at Eyam; there is a cotton mill employing about 100 persons at Calver; a weaving

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factory employing about 80 persons at Tideswell, and another employing about 300 persons at Cressbrook; two tape mills employing about 80 persons, and two dyeworks employing about 100 persons at Tansley; besides smaller factories in other parts of the district. Altogether there are probably about 1,000 persons employed in factories in the district, for the most part in the northern portion. Leadmining was formerly extensively carried on in the district, but the industry has now fallen into comparative decay, and some of the smaller villages, such as Great Hucklow and Foolow, where leadmining was once actively carried on, have suffered in consequence. A fair number of men are still employed at good wages in this industry at Winster. In some places the old spoil-heaps from the leadmines are being worked for fluor-spar, which is used in the fluxing of metals. There are several marble quarries in the district at Bradwell, Tideswell, Haddon, Stanton, Birchover, and elsewhere.

*Roadways.*—There are approximately 282 miles of dedicated roads in the district; the main roads are well constructed and well kept.

*Dwellings and their Surroundings.*—On the whole the housing compares favourably with that of most agricultural districts. The majority of the cottages are of stone with stone-slab roofs, and are in many cases ancient—several cottages, particularly in Eyam, bearing dates of the XVIIth century. They are for the most part in good repair, but I noted cottages with their roofs in bad repair, or with defective eavesputting in Tideswell, Bradwell, Hathersage, Curbar, Eyam Woodlands, Wardlow, Monyash, and Youlgreave. Some cottages—and this is particularly the case in Youlgreave—are damp from being built with backs to earth. There is some overcrowding of houses on area in Bradwell and Tideswell. So far as my observation goes, the worst housing is to be found in Tideswell and Youlgreave. The housing of the working classes is, on the other hand, very good in some parts of the district, and particularly in certain villages, such as Beeley and Edensor, which form part of the estates of large landowners. The housing is very good at Little Longstone. Good cottages have recently been erected at Ashford and Eyam Woodlands. Several good villas have recently been built at Grindleford Bridge in the parish of Nether Padley, which is developing as a residential district.

The great majority of the cottages have gardens, except in some of the more thickly-populated villages, such as Bradwell, Tideswell, and Stoney Middleton, but even in these there is generally an adequate amount of paved or cobbled yard space, though, as already mentioned, there are instances of overcrowding of houses on area in Bradwell and Tideswell. Recently-built cottages are laid out with good gardens and paved curtilages.

Building by-laws were not adopted till January, 1905.

*Water Supplies.*—The following parishes—Ashford, Calver, Eyam (part of), Froggatt, Hassop, Great Longstone, Little Longstone, Rowland, and Stoney Middleton—comprising a total population of about 2,500, are supplied by the Stoke Flat water, the scheme for which was completed in 1903 at a cost of nearly

£14,000. The portion of Eyam parish supplied under this scheme consists of about 30 houses detached from the village of Eyam, and, topographically, forming part of the village of Stoney Middleton, a brook which runs through the latter village forming the dividing line between the two parishes.

The supply consists of an upland water, of good quality and free from risks of pollution, which is delivered by gravitation and laid on in pipes to practically all the houses of the parishes included in the scheme. There are service reservoirs near Rowland and Little Longstone.

Though pure, the Stoke Flat water, being a moorland water, is soft, and is found on analysis to be distinctly plumbo-solvent in action. Cases of undoubted lead-poisoning have been traced to its use. In his annual report for 1908 Dr. Fentem strongly recommended that lime should be added to the water in the reservoir. This was done with good temporary effect, but, the added lime becoming exhausted, fresh cases of lead-poisoning have come under observation. More effective measures are needed to render the water satisfactory in this respect. The parishes of Abney and Abney Grange, Beeley, Birchover, Chatsworth, Cromford, Curbar, Edensor, Over Haddon, Hathersage, Litton (part of, *i.e.*, Cressbrook Village), Middleton by Youlgreave, Pilsley, Rowsley and Alport, Stanton, and Youlgreave, are either entirely or in great part supplied with piped water supplies by owners of estates in these parishes. So far as I could ascertain, these supplies are adequate in amount and of good quality.

The parishes of Bradwell, Chelmorton, Eyam (part of), Eyam Woodlands, Hazlebadge, Litton (the main village), Nether Padley, Offerton, Outseats, Sheldon, Stoke, Taddington and Priestcliff, Tansley, Tideswell, and Winster have also public piped water supplies, some of which, however, are not entirely satisfactory.

The supply to Bradwell is an upland surface water, which is collected in three reservoirs and conveyed in pipes to the houses. This supply, which serves all but about half a dozen houses in the parish, is adequate, except in a very dry season, when it sometimes runs short.

The supply to Eyam Woodlands is obtained by collecting in a small tank the water from two or three springs in the hills above the village. The water is laid on partly to standpipes and partly to individual houses; at the time of my visit some of the newer houses had not yet been supplied with the water. The present supply is inadequate in amount, especially in dry weather, and the shortage is likely to be acutely felt in the near future unless steps are taken to increase the supply, as building is proceeding rapidly in the village.

There appears to be ample water available for all future requirements. A large amount of water runs to waste at the source of the supply and also in the rubble conduit between the springs and the tank reservoir, while there is further waste due to leakage from the iron pipes leading from the tank to the village, some of which are corroded. If proper attention were paid to these points, an abundant supply could be provided.

The Tideswell supply is derived from limestone springs which are collected in a reservoir. The supply is laid on to all the houses in the village.

The surplus of the Tideswell water supply runs to Litton, where it is delivered to two or three standpipes, but the amount of water which reaches Litton from Tideswell is inadequate for the supply of the village. As already mentioned, Cressbrook, which is an outlying hamlet of Litton, is supplied with water by a private owner.

Tansley has two water supplies from springs in the mountain limestone, which are laid on partly to standpipes and partly to the houses.

Winster is supplied with water from a spring at Birchover, which is laid on to standpipes. The supply is inadequate in amount and at times even fails almost entirely. The supplies to Chelmorton, Hazlebadge, and Taddington and Priestcliff are satisfactory.

The Parish of Blackwell is without a water supply. It has been suggested locally that water should be furnished to Blackwell from the Taddington supply, but this suggestion is opposed by the Taddington Parish Council on the ground that they have not sufficient water to spare for the purpose. Dr. Fentem upholds this objection as reasonable.

Great Hucklow derives its supply from a copious stream of moorland water coming from Camp Hill, an elevated site on the neighbouring moors. The water is pure at its source, but in its course runs in open brook through agricultural land and is thus liable to fouling. The water is collected in a trough, from which it is fetched in pails by the villagers.

The Camp Hill source yields an abundant supply of excellent water, and if impounded in a reservoir might readily be made available for the supply by gravitation, not only of Great Hucklow, but of Little Hucklow, Grindlow, and Foolow, which are all very badly off for water. These places have an aggregate population of 404 (Census of 1901) and assessable value of £1,316. A water scheme at an estimated cost of £2,000 has been formulated for these parishes, but up to the present has remained in abeyance.

Wardlow, which has no proper water supply, might easily be included in such a scheme.

Elton has need of a proper water supply. Water has to be fetched by the villagers from a public dip well, situate at an inconvenient distance from many of the houses, and fed by a spring which is liable to surface pollution. When this spring fails, as it does in very dry weather, water has to be fetched from Boroughcliff which is  $\frac{3}{4}$  mile away.

The parish of Eyam is divided into two portions situate more than a mile apart. The low-lying portion forms practically a part of the village of Stoney Middleton, and is, as already mentioned, supplied with the Stoke Flat water. The main village of Eyam, which has a population of about 900, derives its water supply from seven troughs in different parts of the village. Some of these troughs are fed by moorland surface water, others by



springs in the limestone or toadstone measures. The supply to this village is inadequate and unsatisfactory. The streams which supply the troughs are, in most cases, exposed to surface pollution, the water issuing from the pipes at the troughs is often reduced to a mere trickle, so that the process of obtaining half a gallon of water occupies several minutes. Abundance of excellent water is to be obtained from springs in the hill-side above Eyam if it could be made available for the supply of the village. The trough from which the largest number of the villagers derive their supply is known as the River End trough. Rights in the spring supplying the trough, known locally as the Split Spring, were conferred by Act of Parliament on the Wright family in 1803. The water issues at a well-head in a crevice of the millstone grit which here overlies the Yoredale shales. There can be little doubt that, by combining the Split Spring with other springs in the hillside an ample supply of good water could be laid on in pipes to the village, and it should be possible by arrangement with the Wright family to obtain the necessary concessions for a public supply, which is urgently needed for this place.

At Flagg water is drawn up by means of a windlass and bucket from the bottom of an old lead shaft. The supply cannot be regarded as satisfactory, being hard in character and liable to pollution.

The principal centre of population in the parish of Hartington Middle Quarter is the village of Earl Sterndale. The people of this village rely chiefly on rainwater collected from the roofs and stored for the most part in open clay-puddled reservoirs. In time of drought they have to go to a spring about  $\frac{3}{4}$  mile from the village. The village of Crowdecote in the same parish is chiefly dependent on rainwater. The parish has a population of 382, and a rateable value of £1,658. The cost of providing a public water supply has hitherto been regarded as prohibitive, but the needs of the parish, particularly of Earl Sterndale, in this respect are so urgent that a serious effort should be made to provide a proper supply.

The water supply of Monyash is unsatisfactory, being principally from a large reservoir near the road in the middle of the village. The sides of the reservoir are lined with stone, and the water appears to be held up in a basin of clay. From its position it would appear to be liable to pollution by drainage from surrounding farms. There are also two public wells in the village, one of which appears to be liable to pollution by soakage from an adjacent farmyard. A pure water supply is required for this village.

Aldwarke, Brushfield, Grange Mill, Gratton, Highlow, Nether Haddon, and Wheston are small parishes having populations of under 50 at the census of 1901. For the most part these rely for their water supply either on springs or on rainwater caught from the roofs.

*Sewerage and Sewage Disposal.*—In the Northern Sub-District, Stoney Middleton (including a portion of Eyam), Little Longstone, Hathersage and Tideswell, and in the South District Cromford and Winster have complete systems of sewerage and sewage

disposal. The sewers are in all cases constructed of sanitary pipes with cemented joints, and the sewerage appears to be satisfactory. At Little Longstone the sewage, after treatment in settling tanks, is disposed of by irrigation over land on which there is a good growth of osiers. The disposal system is well removed from the village, and a satisfactory effluent is obtained.

In the five other places the disposal system consists of precipitation by alumino-ferric salts, with subsequent irrigation over land.

The Stoney Middleton, Hathersage, and Winster disposal systems are satisfactory, yielding good effluents, and being situate in places remote from dwellings or roads so that no offence is occasioned.

Tideswell is sewered on the "separate" system, the surface water being discharged separately from the sewage by old rubble drains. The sewage disposal works are unsatisfactory. They are situate close to the high road to the south of the town, and being badly managed, give rise to considerable nuisance. They comprise settling tanks in which precipitation is effected by alumino-ferric salts, three filter beds, and a strip of land for irrigation; but the effluent is badly distributed over the land, which is also insufficient for the purpose, and the irrigation is ineffective. The deposits of sludge removed from the filter tanks occasion a very offensive stench. The effluent is discharged to the River Wye.

Cromford is well sewered, but the effluent is not altogether satisfactory. Negotiations are in progress for connecting the sewage system of Cromford with the sewers of the Matlock and Matlock Bath and Scarthin Nick Urban Districts.

At Chelmorton the inhabitants have carried out a sewerage scheme of their own, which the medical officer of health reports as unsatisfactory. I did not myself visit this village.

In some villages, such as Calver, Litton, Cressbrook, Earl Sterndale, Nether Padley, and Youlgreave, partial arrest of the solids is effected by the interposition of settling tanks between the sewers and their outfalls.

Calver is sewered in different sections to the River Derwent. In the main section a settling tank is interposed between the sewer and its outfall.

At Calver Sough a serious nuisance is occasioned by the overflow of a cesspool into a gutter by the roadside.

Eyam is sewered by old rubble drains, with a few lines of modern sanitary piping. There are two principal lines of sewerage; one to the south, the other to the south-east, towards Stoney Middleton. The greater part of the sewage runs by the roadside, partly in a rubble drain, partly in an open channel, to the Middleton Brook. A proper sewerage scheme is needed for this village, but this need is less urgent than that of water supply. The sewerage might be economically effected if the sewers of Eyam were connected with the Stoney Middleton sewerage system.

Elton is irregularly sewered by odd lengths of rubble drain, which in some instances run under the houses. A sewerage

scheme, which might be conveniently carried out in three separate sections, is required for this village.

Sewerage schemes are needed for the villages of Ashford, Bradwell, Earl Sterndale, Eyam Woodlands, Great Longstone, Monyash, Tansley, and Youlgreave.

In the opinion of the medical officer of health the village of Taddington, which I did not visit, also needs sewerage.

Ashford, to which village many visitors resort in summer, is imperfectly drained by old rubble sewers, with a few lengths of sanitary piping. The effluent is discharged untreated to the river.

Earl Sterndale is partially sewered. The sewage passes to a settling tank, the overflow from which runs down a ditch to Four Lane End, and gives rise to serious nuisance. This nuisance should be promptly dealt with, but a proper water supply should be provided for this village before a complete scheme of sewerage is carried out.

A system of sewerage is urgently needed for Eyam Woodlands, where a large number of new houses have recently been built. The sewage of Eyam Woodlands could be conveniently disposed of in conjunction with that of Nether Padley (Grindleford), where there are several modern villa residences; the latter place is well sewered, but the disposal arrangements are unsatisfactory, consisting merely of a settling tank, inadequate in size, from which a very foul effluent is discharged to the River Derwent.

The sewerage of Great Longstone is unsatisfactory, consisting of old rubble drains with untrapped road gullies. The sewage runs for some distance in open channels, and is eventually discharged untreated into a watercourse.

Monyash is partially sewered by old rubble drains; the bulk of the sewage disappears into two swallow-holes in the limestone rock.

Gross nuisance, with serious pollution of a watercourse, occurs at Tansley, where the greater part of the sewage is discharged into a brook, which passes through a farmyard, at the north end of the village.

At Youlgreave serious nuisance arises from slop sewage discharging to an open gutter by the side of the main road. The sewerage of the village is generally defective. The greater part of the sewage is taken to a settling tank, the overflow pipe from which is taken under the river and discharged into a swallow-hole in the limestone rock. Alport, the chief residential quarter of Youlgreave, has been sewered by the owner of the land, the effluent being discharged untreated into the river.

Sewerage schemes are also needed, though, perhaps, less urgently, in respect of Calver, Curbar, Litton, and Pilsley.

In those parishes in which there is no sewerage system, such drains as exist are mostly flat-bottomed structures of rubble, or foul open channels, but when new lengths of sewer are laid down in these parishes they are constructed of sanitary pipes disposed so as to fit in with any complete scheme of sewerage that may subsequently be carried out.



In several farms I noted escape of farm sewage on to roads. A very bad example of this occurred at Dale End Farm in the parish of Elton.

Pollution, often very gross, of rivers and watercourses by sewage is common throughout the district.

House drainage is defective in many of the older houses, as at Eyam, the waste pipes of sinks being often not properly disconnected from the drain.

*Disposal and Removal of Excrement and House Refuse.*—The prevalent method of excrement disposal is the old-fashioned privy midden, but in both the north and south portions of the district water closets and pail closets are being introduced in increasing numbers. In the north district there are, approximately, 1,800 privy middens, 300 pail closets, 294 water closets, and 23 slop-water closets; in the south district there are, approximately, 1,180 privy middens, upwards of 500 pail closets, about 470 water closets, and about 30 slop-water closets.

Many of the privy middens are of a very unsatisfactory character, the receptacles being unduly large, in some cases more than 100 square feet in superficial area, and generally exposed to rain. The worst middens of this type which came under my notice were at Hathersage and Tideswell. In Oddfellows Row, Hathersage, there are privies without any receptacles, which permit the discharge of excreta through an opening at the back on to the surface of a field. Paper from these privies was being blown about freely. In many parts of the district, and particularly at Youlgreave, I found privies overfull, with their contents reaching nearly to the level of the seat.

Midden privies, properly covered in and with the floor of the receptacle concreted and raised above ground level, have recently been erected in connection with some new cottages at Ashford.

In a few cottages at Tideswell the water closet is in the pantry, the two forming a single apartment with no intervening partition. This is a very insanitary arrangement.

In some cases, as at Bradwell, water closets are drained to disused mine shafts. The old mines of the district are full of water, which travels great distances underground through fissures and natural "pipes" in the limestone, and in some places comes to the surface in the form of springs, which are used for drinking water. The practice of connecting water closets with old mine shafts cannot, therefore, be regarded as free from possible danger.

There is no public scavenging in any parish of the south district, the removal of excrement and house refuse being left entirely to private and individual effort. In some instances, as at Beeley and Chatsworth, house refuse is removed weekly by the owners of estates. In four parishes only of the north district, Bradwell, Calver, Hathersage, and Eyam, is there any public scavenging. In each of these instances the District Council have delegated their powers in this respect to the respective parish councils. In the three first-named villages house refuse only is removed. At

Bradwell house refuse is removed once a month and carried away to a tip; the arrangements are even less satisfactory at Calver and Hathersage, and in the latter village nuisances from accumulated refuse abound.

At Eyam fairly satisfactory arrangements have been made for the removal both of house refuse and night soil. Scavenging is delegated to the parish council, and is let by them to a private contractor. There are about 50 pail closets in the village, which are to be emptied weekly, and a large number of privy middens which are to be emptied four times annually or as required. There are two tips, one for night soil and ashes in a field near an old and little-used lane between Eyam and Stoney Middleton, another for hardware and house refuse at the foot of the hill on the road between Eyam and Stoney Middleton, near the Bell Inn. The field in which the first-named tip is situate is trenched to carry off moisture.

In this village I found a serious nuisance, due to an abominable heap of faecal refuse which had been emptied from the pit privy of the village school, and was lying against the school boundary wall. This offensive accumulation had been there for some weeks. I was informed that the school manager had undertaken to remove it to his garden, but was awaiting his gardener's convenience to do so.

The cost of the contract for the scavenging of Eyam parish is £35 per annum, for Eyam proper, and £8 for the Stoney Middleton portion of the parish.

The rural district council have applied for the issue of a special expenses order in respect of the cost of removing house refuse from premises in the parish of Tideswell. The parish council, to whom the district council propose to delegate their powers in this matter, are willing to contract for the removal of house refuse weekly, but protest against the emptying of privy middens being included in the order; they suggest that the cleansing of privies should be carried out by the occupiers themselves, the parish council undertaking to assist in the supervision of the work and to report any nuisance to the sanitary inspector. In this connection Dr. Fentem, medical officer of health for the north district, has recently made an exhaustive survey of the parish of Tideswell, inspecting upwards of 450 houses with their adjoining premises. The following figures given by him furnish exact information as to the methods of excrement disposal obtaining in the parish at the date of his report, November 2nd, 1908:—

Earth or ashes closets	...	...	...	13
Pail or pan closets	...	...	...	15
Privy middens (approved type)	...	...	...	39
Privy middens (old type)	...	...	...	209
Water closets (so-called—see below)	...	...	...	173
Cesspools in sewerage area	...	...	...	0

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Of the 173 so-called water closets, 17 are hand-flushed, generally by means of a jug or can of water, others are defective in various respects; only 119 water closets were found either fairly satisfactory or in good order.

Water closets are being substituted for privy middens, &c., at the rate of about eight conversions annually. There are 28 houses in outlying parts of the township which it is not practicable to connect with the sewers.

Of the privy middens, about 160 are unroofed, and the contents of their receptacles exposed to soakage by rain. In some cases accumulations were found, estimated at four or five tons in a single pit. The medical officer of health points out that many of the smaller householders have no land on which to dispose their excremental and house refuse, that the difficulties in the way of removal of contents from privy middens by the householder are in some cases almost insuperable, and that where this can be arranged for, the cost is great and a serious financial burden on the tenants. He concludes, therefore, that the removal of only house refuse by the local authority would not meet the needs of the parish. In this view, from my own observations, I fully concur, and, while I am of opinion that for the reasons above stated public scavenging is certainly required in this parish, I cannot recommend that a special expenses order should be issued to the Bakewell Rural District Council in respect of the cost of removing only house refuse from premises in the parish of Tideswell, to the exclusion of the contents of earth closets, pail closets, or privy middens.

At present, house refuse is carried to a public tip on the ridge above the village, the contents of which are offensive and are blown freely about. When I visited the place I found a woman, who lived in an adjacent cottage, engaged in burning a large quantity of paper which had blown into her garden from the tip. There are public refuse tips in several parishes. In some cases, as at Winstor and Ashford, these are placed in undue proximity to main roads. The public tip at Tansley is so situate as to cause pollution of a neighbouring stream into which it drains. In some villages, as Curbar and Eyam Woodlands, disused parish pounds are used as refuse tips. The pound in the latter place is in the middle of the village, and its contents were, at the time of my visit, very offensive.

Public scavenging of excrement and house refuse is required in several of the larger villages, and both medical officers of health have repeatedly called the attention of the rural district council to this need.

*Common Lodging-houses.*—There are two common lodging-houses in the rural district, both at Stoney Middleton. Goddard's lodging-house is licensed for 34 lodgers; it is clean but is damp through absence of eave-spouting, and the walls, ceilings, and floors are dilapidated; the accommodation for washing consists merely of a sink in the common kitchen, which is used by all the lodgers including four women as a



sitting-room. I found insufficient towels provided. This lodging-house should be put into thorough repair and provided with proper accommodation for washing.

Ellen Unwin's lodging-house, licensed for 26 lodgers, is structurally dilapidated, though not to the same extent as the former. The closet accommodation is very insufficient, consisting of a single ash privy for all the lodgers. The provision for washing consists merely of a small sink in the kitchen.

Both the above lodging-houses have been much used recently by navvies employed on the construction of the Derwent Valley aqueduct.

*Dairies and Cowsheds.*—There are 11 cowsheds and dairies in the north district and 89 in the south. I visited several cowsheds and found them properly limewashed, and, in most instances, adequately lighted, ventilated, and drained, with good floors and sufficient cubic air-space. Both medical officers of health report that structural improvements have been recently carried out in several of the cowsheds in their respective districts. A considerable quantity of milk is sent from this district to various large towns, particularly Manchester. Cowsheds and dairies are regularly inspected.

*Slaughter houses.*—There are 14 registered slaughter-houses in the north district and 18 in the south. I visited several of these and found them clean and properly limewashed, but the premises are generally old and inconvenient, the flooring often irregular and in bad repair, and the drainage not infrequently defective. In some instances, as at Winster, Ashford, and Cromford, no water is laid on to the slaughter-house. At Bradwell I found butchers' offal deposited on a manure tip. In Stoney Middleton I found a large quantity of butchers' offal in a very offensive condition, and swarming with flies, deposited in a privy midden, 54 square feet in area, situate in a narrow lane with houses on both sides, and 10 yards from the window of a dairy. Two dogs were feeding on the offal.

By-laws for the regulation of slaughter-houses were adopted in 1907. They are regularly inspected.

*Bakehouses.*—There are 14 bakehouses registered in the north district and six in the south. These are all small retail bakehouses, in which no mechanical power is used. I did not inspect any of these. They are regularly inspected, and are reported by the medical officers of health as being clean and satisfactory.

*Provisions for dealing with Cases of Infectious Disease.*—There is no isolation hospital for cases of infectious disease other than small-pox. The Bakewell Rural District is one of the constituents of the Haddon Joint Hospital District, which was formed by order of the Derbyshire County Council, under the Isolation Hospitals Act, 1893, in April, 1897. The Haddon Joint Hospital District comprises the whole area of the Bakewell Union, including, besides the Bakewell Rural Sanitary District, the Urban Sanitary Districts of Matlock, Bakewell, Matlock Bath, North Darley, South Darley, and Baslow and Bubnell in

the Bakewell Union, and also the Urban District of Bonsall in the Ashbourne Union.

The total population of the joint hospital district is about 36,500; the area, 107,065 acres; and the rateable value, £237,481. The sole provision\* made in the large joint district for the isolation of cases of infectious disease, other than small-pox, consists in a contract for the use of six beds, at a rent of £200 per annum, made in 1904 with the Trustees of the Whitworth Hospital at Darley Dale. This is a stone-built hospital for general diseases, standing on a quarter of an acre of ground, and surrounded by an iron railing. The hospital is provided with a steam disinfecter. There is no ambulance attached to the hospital, but arrangements are made with the local cab proprietors for the conveyance of patients.

This provision would under any circumstances obviously be insufficient for the needs of so large a district; its inadequacy is the more manifest when it is considered that the average number of cases of infectious disease notified† per annum in the joint hospital district during the years 1891-1907 has been:—

Small-pox	...	...	...	...	10
Scarlet fever	...	...	...	...	111
Diphtheria	...	...	...	...	21
Enteric fever	...	...	...	...	14

The insufficiency of the provision thus afforded has been seriously felt by both medical officers of health for the Bakewell Rural District, who have often been unable to effect the isolation of cases of infectious disease. This inconvenience has been especially felt in the northern sub-district. This report is not concerned with the affairs of the Haddon Joint Hospital District Committee except in so far as they affect the Bakewell Rural District, which is a constituent of the joint hospital district; but it may be mentioned that the committee has since 1897 successively considered and rejected 10 hospital sites approved by the medical officer of health for the County of Derby, and has, down to 1908, spent £4,640, of which £1,500 has been expended in providing a small-pox hospital, to be presently described, £1,200 on treating cases in the Whitworth Hospital, and the balance of over £1,900, partly on salaries and rent of Whitworth Hospital beds, and partly in legal expenses arising out of abortive negotiations. Recent proposals for the erection of a hospital are now being considered by the committee.

A hospital for cases of small-pox, which was commenced in 1906, has been erected by the joint hospital district committee at Watergrove, near Wardlow, in the Bakewell Rural District, at

\* I am informed, however, that a small temporary hospital has been independently provided by the Bakewell Urban District Council.

† As notification was not compulsory in some of the constituent districts until several years later than 1891, the figures given cannot include all the cases which actually occurred.

a cost of £1,500. This hospital, which contains 8 beds in 2 wards, is of wood and iron erected on brick foundations. It is in a well isolated position, and is fully furnished and kept in order ready for immediate use. It is provided with a steam disinfecting chamber. Water is supplied from a small catchment reservoir near the hospital.

*Disinfecting Apparatus.*—There is no disinfecting apparatus belonging to the Bakewell Rural District Council. The need for such an apparatus has been repeatedly urged by the medical officer of health for the northern sub-district. The disinfecting apparatus at the Whitworth Hospital and the Watergrove Small-pox Hospital have been already mentioned. Neither of these is conveniently situated for general use in the district.

*Disinfection* is carried out by the inspectors of nuisances by means of formalin distributed by an Equifex spray-producer and by thorough washing of the rooms and their contents with carbolic acid or izar. Sulphur fumigation is also resorted to in the southern sub-district.

In cases of diphtheria the district council, on application by the medical attendant, provides antitoxin free of charge to those unable to pay for it.

*Notification of Infectious Diseases.*—In 1906 measles was added to the list of infectious diseases compulsorily notifiable. From January 1st to March 31st, 1909, the cost of notification of measles in the northern sub-district alone was £63, and from March 31st to June 15th, 1909, £22 10s. In the opinion of both medical officers of health no gain proportionate to the cost incurred has resulted from the notification of measles. When sanction was given to this measure it was stipulated by the Board that the disease should remain notifiable for a period of five years. The district council have, however, recently applied for sanction for the revocation of the order making measles notifiable, and sanction was accorded on June 22nd, 1909.

In April, 1907, cerebro-spinal fever was made notifiable for a period of twelve months.

*Medical Officers of Health.*—There are two medical officers of health for the district, viz., for the northern sub-district Dr. Philip Fentem, M.D., M.R.C.S., at a salary of £71 per annum, and for the southern sub-district Dr. John Knox, M.D., L.R.C.S., at a salary of £50 per annum. In both cases repayment of half the salary is made by the county council. Both officers have a good knowledge of their district, in which they are engaged in general practice. Dr. Fentem's annual reports are valuable and give good information as to his district. Dr. Knox's reports are comparatively meagre. It is inconvenient that there should be two medical officers of health for a district of this size. There are important problems of sewerage and water supply, and other questions, such as that of hospital isolation, awaiting solution in this district, on which a single medical officer of health could advise the Council with more authority than attaches to the advice of an officer who is only responsible for a portion of the district.



*Inspectors of Nuisances.*—There are two inspectors of nuisances who are also sanitary surveyors for their respective sub-districts, viz.: for the northern sub-district, Mr. Thomas Hawley, who receives a salary of £125 per annum as inspector of nuisances and £15 as sanitary surveyor; and for the southern sub-district, Mr. Samuel Dawson, who receives a salary of £90 as inspector of nuisances and £10 as sanitary surveyor. In each case repayment is made by the County Council of half the salary received by the officer as inspector of nuisances.

Mr. Hawley, who was formerly a builder, holds the sanitary inspector's certificate of the Royal Sanitary Institute. He is fairly active and knows his district well. He gets about his district by means of a pony-trap for which he keeps two ponies. It is to be regretted that he resides outside his district, at Monyash in the southern sub-district. If he lived in the centre of his district he would work more effectively.

Mr. Dawson, who was formerly an inspector of nuisances under the Derby Corporation, holds the sanitary inspector's certificate of the Royal Sanitary Institute and also the City and Guilds certificate for plumbing. He is a competent officer and knows his district well. He resides at Ashford and gets about by means of a bicycle and a motor-bicycle.

By-laws are in force in the district regulating:—

New buildings, sanctioned January 10th, 1905.

Common lodging houses, sanctioned December 7th, 1893.

Cleansing of footways and pavements, the removal of house refuse and the cleansing of earth-closets, privies, ashpits and cesspools, sanctioned December 7th, 1893.

Slaughter-houses, sanctioned November 5th, 1907.

Regulations with respect to Dairies, Cowsheds, and Milkshops have been made and came into force on October 1st, 1907. The Infectious Diseases (Prevention) Act, 1890, and such parts of the Public Health Acts Amendment Act, 1890, as are applicable to rural districts are in force in the district.

In conclusion, it is my pleasant duty to thank Dr. Sidney Barwise, medical officer of health of the county of Derbyshire; Drs. Fentem and Knox, medical officers of health of the rural district; Messrs. Hawley and Dawson, inspectors of nuisances; Mr. Alfred Hawes, clerk to the Rural District Council; and others who rendered me assistance in the course of my inspection.

REGINALD FARRAR.

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#### RECOMMENDATIONS.

1. The district council should endeavour to secure better housing conditions in certain parts of their district, particularly in Bradwell, Tideswell, and Youlgreave. Attention should be paid to the condition of roofs, eavespouting, and down-spouts throughout the district generally.

2. Several villages, specified in the body of this report, are in urgent need of adequate supplies of pure water. Arrangements should be promptly made for providing water supplies for those villages which are deficient in this respect. Measures should be taken to correct the plumbo-solvent action of the Stoke Flat water supply.

3. Attention should be paid to sewerage and sewage disposal throughout the district, special attention being given first to those villages which, as shown in the preceding pages, most urgently require attention.

4. The district council should carefully consider the question of public scavenging, in respect of the removal of excrement and house refuse, arranging for public scavenging under sec. 42 of the Public Health Act, 1875, where needful. At Tideswell the work should not be limited to the removal of dry house refuse only from premises in this parish, but should include the cleansing of earth closets, pail closets, and privy middens.

5. The two common lodging-houses in Stoney Middleton should receive the early attention of the district council.

6. The district council should pay more attention to the slaughter-houses of their district in respect of flooring, drainage, and disposal of garbage.

7. The rural district council should use their influence on the Haddon Hospital Committee to promote the provision of proper hospital accommodation for cases of infectious disease in their district.

8. A disinfecting apparatus should be provided for this district; this might be most conveniently done in connection with the hospital.

9. When a vacancy occurs in the office of medical officer of health, the opportunity should be taken to place the whole district under the care of a single officer.

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